IN THE CLAIMS:

Please cancel claims 4, 11, and 21-42, amend claims 1, 2, and 12-16, and add new claims 43-62 as follows:

1. (Currently Amended) An opto-electronic package, comprising:

a substrate;

an optically active device flip-chip bonded to the substrate, wherein the optically active device is selected from the group consisting of a vertical cavity surface emitting laser (VCSEL) having a lens directly attached thereto, an array of vertical cavity surface emitting lasers having a microlens array directly attached thereto, a light emitting diode (LED) having a lens directly attached thereto, a photodetector having a lens directly attached thereto, and an optical modulator having a lens directly attached thereto; and

an integrated circuit bonded to the substrate

2. (Currently Amended) The opto-electronic package of claim 1 wherein the optically active device is flip-chip bonded to the ~~the~~ substrate using solder bumps.

3. (Original) The opto-electronic package of claim 1 wherein the substrate is selected from the group consisting of a Ball Grid Array substrate, an organic laminate substrate, and a multi-layer ceramic substrate.

4. (Canceled)

5. (Original) The opto-electronic package of claim 1 wherein the integrated circuit is selected from the group consisting of an optical device driver, a transimpedance amplifier, a microprocessor, a microprocessor chip set, a networking integrated circuit, and a memory.

6. (Original) The opto-electronic package of claim 1, further including a printed circuit board (PCB) bonded to the substrate.

7. (Original) The opto-electronic package of claim 6, wherein the PCB includes a waveguide to propagate light to or from the optically active device.

8. (Original) The opto-electronic package of claim 7, wherein the waveguide includes a holographic element to diffract light to or from the optically active device.

9. (Original) The opto-electronic package of claim 7, wherein the waveguide includes a sloped facet to reflect light to or from the optically active device.

10. (Original) The opto-electronic package of claim 6, wherein the printed circuit board (PCB) is flip-chip bonded to the substrate using solder reflow technology, where solder reflow surface tension pulls the substrate into alignment with the PCB.

11. (Cancelled)

12. (Currently Amended) The opto-electronic package of claim ~~11~~ 13, wherein the substrate is selected from the group consisting of a Ball Grid Array substrate, an organic laminate substrate, and a multi-layer ceramic substrate.

13. (Currently Amended) ~~The opto-electronic package of claim 11~~ An opto-electronic package, comprising:

a substrate;

an integrated circuit is bonded to the substrate; and

an optically active device with a directly attached optical element flip-chip bonded to the integrated circuit, wherein the optically active device with [[an]] the directly attached optical element is selected from the group consisting of a

vertical cavity surface emitting laser (VCSEL) ~~with an attached lens~~ having a lens directly attached thereto, an array of vertical cavity surface emitting lasers ~~with an attached microlens array~~ having a microlens array directly attached thereto, a light emitting diode (LED) ~~with an attached lens~~ having a lens directly attached thereto, a photodetector ~~with an attached lens~~ having a lens directly attached thereto, and an optical modulator ~~with an attached lens~~ having a lens directly attached thereto.

14. (Currently Amended) The opto-electronic package of claim ~~11~~ 13, wherein the optically active device with [[an]] the directly attached optical element is flip-chip bonded to the integrated circuit using solder bumps.

15. (Currently Amended) The opto-electronic package of claim ~~11~~ 13, wherein the integrated circuit is selected from the group consisting of an optical device driver, a transimpedance amplifier, a microprocessor, a microprocessor chip set, a networking integrated circuit, and a memory.

16. (Currently Amended) The opto-electronic package of claim ~~11~~ 13, further including a printed circuit board (PCB) bonded to the substrate.

17. (Original) The opto-electronic package of claim 16, wherein the PCB includes a waveguide to propagate light to or from the optically active device.

18. (Original) The opto-electronic package of claim 17, wherein the waveguide includes a holographic element to diffract light to or from the optically active device.

19. (Original) The opto-electronic package of claim 17, wherein the waveguide includes a sloped facet to reflect light to or from the optically active device.

20. (Original) The opto-electronic package of claim 16, wherein the printed circuit board (PCB) is flip-chip bonded to the substrate using solder reflow technology, where solder reflow surface tension pulls the substrate into alignment with the PCB.

21-42 (Cancelled)

43. (New) An opto-electronic package, comprising:

a substrate;

an optically active device with a directly attached optical element flip-chip bonded to the substrate; and

an integrated circuit bonded to the substrate.

44. (New) The opto-electronic package of claim 43, wherein the optically active device is flip-chip bonded to the substrate using solder bumps.

45. (New) The opto-electronic package of claim 43, wherein the substrate is selected from the group consisting of a Ball Grid Array substrate, an organic laminate substrate, and a multi-layer ceramic substrate.

46. (New) The opto-electronic package of claim 43, wherein the optically active device with the directly attached optical element is selected from the group consisting of a vertical cavity surface emitting laser (VCSEL) having a lens directly attached thereto, an array of vertical cavity surface emitting lasers having a microlens array directly attached thereto, a light emitting diode (LED) having a lens directly attached thereto, a photodetector having a lens directly attached thereto, and an optical modulator having a lens directly attached thereto.

47. (Original) The opto-electronic package of claim 43, wherein the integrated circuit is selected from the group consisting of an optical device driver, a

transimpedance amplifier, a microprocessor, a microprocessor chip set, a networking integrated circuit, and a memory.

48. (New) The opto-electronic package of claim 43, further including a printed circuit board (PCB) bonded to the substrate.

49. (New) The opto-electronic package of claim 48, wherein the PCB includes a waveguide to propagate light to or from the optically active device.

50. (New) The opto-electronic package of claim 49, wherein the waveguide includes a holographic element to diffract light to or from the optically active device.

51. (New) The opto-electronic package of claim 49, wherein the waveguide includes a sloped facet to reflect light to or from the optically active device.

52. (New) The opto-electronic package of claim 48, wherein the printed circuit board (PCB) is flip-chip bonded to the substrate using solder reflow technology, where solder reflow surface tension pulls the substrate into alignment with the PCB.

53. (New) An opto-electronic package, comprising:

a substrate;

an integrated circuit is bonded to the substrate; and

an optically active device with a directly attached optical element flip-chip bonded to the integrated circuit.

54. (New) The opto-electronic package of claim 53, wherein the optically active device with the directly attached optical element is selected from the group consisting of a vertical cavity surface emitting laser (VCSEL) having a lens directly attached thereto, an array of vertical cavity surface emitting lasers having a microlens array directly attached thereto, a light emitting diode (LED) having a lens directly attached thereto, a photodetector having a lens directly attached thereto, and an optical modulator having a

lens directly attached thereto.

55. (New) The opto-electronic package of claim 53, wherein the substrate is selected from the group consisting of a Ball Grid Array substrate, an organic laminate substrate, and a multi-layer ceramic substrate.

56. (New) The opto-electronic package of claim 53, wherein the optically active device with the directly attached optical element is flip-chip bonded to the integrated circuit using solder bumps.

57. (New) The opto-electronic package of claim 53, wherein the integrated circuit is selected from the group consisting of an optical device driver, a transimpedance amplifier, a microprocessor, a microprocessor chip set, a networking integrated circuit, and a memory.

58. (New) The opto-electronic package of claim 53, further including a printed circuit board (PCB) bonded to the substrate.

59. (New) The opto-electronic package of claim 58, wherein the PCB includes a waveguide to propagate light to or from the optically active device.

60. (New) The opto-electronic package of claim 59, wherein the waveguide includes a holographic element to diffract light to or from the optically active device.

61. (New) The opto-electronic package of claim 59, wherein the waveguide includes a sloped facet to reflect light to or from the optically active device.

62. (New) The opto-electronic package of claim 58, wherein the printed circuit board (PCB) is flip-chip bonded to the substrate using solder reflow technology, where solder reflow surface tension pulls the substrate into alignment with the PCB.